2: Redfield & Villa Rojas E-4,5 (1938) 1939 NV9 Tzeltal NV9

Concerning the correspondence between the months and the agricultural activities, Emeterio Pineda says:

"*Moc* is the month in which fences should be repaired, and *Olalti* is that in which the sowing is to be done, no matter what may be the condition of the atmosphere, so that if rain fails or is insufficient or is excessive, nevertheless it may not be done in any other month even though then weather and precipitation permit.

Uch (*Uck*): in this month plants are attacked by ailments and insects, in particular by insects such as plant lice which weaken and destroy them; in the month of *Elach* (*Eluch*) the favorable winds should cure them. But in case they are not favorable, the loss of many plants is sure, as, for example, the potato which neither flowers nor gives a yield. *Nichquin* corresponds with the period of flowering, *Sbalvinquil* with pollenization and *Xchibalvinquil*, *Yoxibalvinquil* and *Xchanibalvinquil* with the three periods of the formation of the seed: that of the pearl, that of the milk and that of the starch.

Poin (*Pom*): in this month honey may be taken from the hives, and the harvest may be carried in. *Mux* represents the beginning of cold, and *Yaxquin* the Christmas season."[66]

O. D. E. Bunge quotes this paragraph but attributes it erroneously to Nuñez de la Vega.[67] Bunge's publication provides other interesting data on this subject. It may be added that the nineteen-month calendar with close relation to the agricultural year has recently been reported by Weitlaner[68] for a non-Maya people, the Chinantec, in northern Oaxaca, and for the Mazatec, a people neighboring the Chinantec.[69]

[66] Emeterio Pineda, 1845, p. 113.
[67] Bunge, 1935, p. 54.
[68] Weitlaner, 1936, pp. 197–201.
[69] Bevan, 1938, p. 5.

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4: Villa Rojas E-4, 5 (1938-1944) 1969
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114 27) but without touching on social organization.

[101] [122] Study of social organization began in 1938 when I made my first trip through the region under the auspices of the Carnegie Institution of Washington (Redfield and Villa Rojas, 1939, pp. 107–19). In 1942–44 we spent several periods among the Tzeltal of Oxchuc, establishing camp at Yochib, and published the results soon thereafter (Villa Rojas, 1946, 1947).

Since 1957 various investigations by the universities of Chicago, Harvard, and Stanford have been headed by the anthropologists Sol Tax, Norman A. McQuown, Evon Z. Vogt, Julian Pitt-Rivers, and A. Kimball Romney.

221 241 SUBSISTENCE PATTERNS AND FOOD HABITS

The Milpa

Nothing is of greater importance to the Indian than to have a good *milpa*. Three classes of milpas are cultivated: *sijomal*, planted in mid-January and harvested three months later; *nal-aual* or "March milpa" planted in mid-March and harvested toward the end of August; the main milpa, *jabil-caltic* or "milpa of the year," sown between April and May and harvested between November and December. The first two types are most often cultivated in the lower zone of Tierra Caliente, where humidity is favorable.

241 804 Among the Tzeltal of Oxchuc (Villa Rojas, 1946, pp. 510–39), milpa work begins in February with the measuring of the plot. The measuring rod (*jaubtic*), which presumably corresponds to a *brazada* (the distance between the arms extended), is equivalent to 1.98 m. The area 8 brazadas square takes the name of *tarea* (about 256 sq. m.). The area of the milpa is also computed according to the number of ears of corn needed for seeding; 60 ears of corn are required to fill 1.5 hectares, the average in milpas that we observed.

241 412 Since the bush is short, only a hatchet (*eche*) is necessary to cut it down. The

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241 [412] machete (*machit*) or the *luk*, a sort of curved machete with a long handle, are the implements needed. The cutting of the grass from the plot where the milpa had been the previous year is *selab*; the cutting of bush grown for three or four years is *sok-uej*. The work of cutting the bush is done by the entire family, including children of seven or eight years old.

[221] [412] The planting is done between April and May after the first rains, with a long stick whose tip is hardened by fire or protected by a metal point. The seed must [242] come from large, healthy ears whose tips have been cut off because they have small [824] corn. The *olote*, or corncob, is either kept or thrown away at a distance to avoid its being used as fuel, for this would hurt the milpa which then would produce ears with broken kernels.

241 462 785 834 The task of planting is a very delicate matter, to be performed after fasting and sexual abstinence. It is exclusively a man's affair. A great banquet is served at noon, 241 574 generally outdoors as the hut interiors are small, to the friends and neighbors who will participate as helpers. Sometimes as [476] many as 10 men help to plant a friend's milpa. The meal is offered "precisely when the sun stops for a moment midway on its run and the doors of the Church of Heaven are opened, from where the quality of the banquet is observed." This is *s-uelil-abal* ('meal of the planting').

241 262 272 574 [263] When things are properly done, the meal consists of a number of items. First the *atole* (*pajal-ul*) is served, which is slightly sour and sweetened with *panela*. As "companion" to this atole are tamales (*chenkul-uaj*), which are prepared with cornmeal and ground beans. It is said that both things are to be served together so that "the seed may penetrate deep into the ground."

241 252 262 574 After this preliminary snack comes what is considered the main course for each person: a hard-boiled egg in a thick reddish broth prepared from dough and ground chile dissolved in water; a large tortilla;

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the roots of each plant so that it will be protected. One farmer commented on this process: "The face of the earth remains loose. Thus the corn remains of one heart. Nothing dies because the soil is moved, and the tender shoots begin to grow. When the second hoeing is finished, God looks at it to see that the corn matures." In the second hoeing, any corn which has grown between hillocks is pulled out so it will not deprive the main stalks of strength.

When the corn has matured, the stalks are doubled over to hasten the drying process. The mature cobs are left on the doubled-over stalks for about two weeks to ensure the maximum drying of the kernels before har-

TABLE 6. Schedule of Activities in Corn Production

Activity	*Month*	*No. of days necessary for task*	*Helpers*	*Tools*
Clear irrigation ditches	Oct.	6		Machete, forked stick
Fence fields	Nov.	4		Machete, ax
Cut stalks of last year's crop; burn leaves and weeds	Dec.	4		Machete, forked stick
Plow land 3 times	Jan.	3	Oxen	Plow
Clear irrigation ditches	Feb.	2		Machete, forked stick
Irrigate land and leave 6 days	Feb.	2		
Select seed and put in water, leaving overnight	Mar.	1	Wife	
Measure rows and distance between hills so there will be 5 handspans between each hillock; plant corn	Mar.	1		Digging stick, string, net bag
Irrigate planted corn	Mar.	1		
First hoeing	Apr.	4	2 or 3 men	Hoe
Second hoeing	May	3	2 or 3 men	Hoe
Fix irrigated ditches	June	1		Machete
Outside employment	July–Aug.			
Double over corn and leave 15 days	Sept.	4		
Pick corn; put in net bag and degrain cobs with few kernels; carry home harvest.	Oct.	5	Wife, horse	Net bags, sticks,

SOURCE: Information from a farmer possessing ½ hectare of irrigated land in center. He has no sons and one married daughter, whose husband works in sawmill.

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244 which there is a black variety and a colored variety, and (2) climbing beans, of which there are four subclasses: "painted," white, yellow, and black. Beans must be grown only in irrigated lands of highest productiv-

TABLE 8. Schedule of Activities in Wheat Production

Activity	Winter wheat	Summer wheat	No. of days necessary for task: Winter wheat	Summer wheat	Helpers	Tools
243 464 461 Clear land	Dec. 7	May 12	5	2	2 paid workers	Machete, forked stick
412 Irrigate land;						
407 leave soaking	Dec. 7	May 15	1	1		
Plow	Dec. 15	May 23	1	2	Oxen team	Plow
221 Sow seed broadcast; cover, crossing over twice	Dec. 16	May 24	1	1	Oxen team	Plow
Cut wheat	May 1	Oct. 5	2	2	2 or 3 unpaid workers	Scythe
Thresh						
Carry wheat to shelter	May 3	Oct. 7				Net bags
Horses trample wheat	May 4	Oct. 8				
Shake stalks	May 5	Oct. 9	3	3	4 or 5 unpaid workers, 5 horses	Forked stick
Scoop grain into wooden box and sift to get rid of chaff						Box with wire mesh
Put grain in burlap bags; carry to houses on horseback						Burlap bags

[115] SOURCE: Information from two informants, one who grows winter wheat and the other who grows summer wheat, both cultivating. ½ hectare of irrigated land.

244 ity. The land in the center, except for the fertilized corral areas, has lately yielded a very poor harvest. People say that the soul of the bean departed when they introduced the crop to their ejido plots in hot country. The scheduling of bean production is shown in Table 9.

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Women work steadily at making pottery. Older girls help with household tasks from the time they are six in order to permit their mothers to make pottery. They bring the water from the faucets installed at every other corner of the streets in the center, degrain corn, and when they are about ten years of age assist in grinding corn or bring the cooked corn to the mill. In three-generation families, the older woman tends to the tasks of preparing the meals while the younger women make pottery.

The men work uninterruptedly at agricultural tasks, taking only a noon break to eat a lunch of tortillas, coffee, and sometimes beans. During periods of intensive activity, women or children bring a hot lunch to the fields. At about three-thirty they return home, sometimes stopping to collect firewood along the way. When they arrive home, there are no greetings. They deposit their loads of harvested crops, firewood, or *zacate* (leaves and grasses to pack pottery). The children pick these up and bring them into the kitchen with no words spoken. The men sit on the bench of the porch, sometimes assisting their wives with degraining, and "rest their heart" until supper is served about six o'clock. The final task of the day is cooking the nixtamal for the following day's meals. The family retires about eight o'clock.

The weekly scheduling of household celebrations indicates the thorough absorption of the Catholic calendar into the social schedules of the town. The choice of Saturday and Sunday for most household celebrations is geared to a week in which Sunday is a day of rest.

Other significant days of the week are Thursday and Friday. Thursday is thought to be the day when "the earth is open." House curing fiestas are scheduled on this day since the earth of the house floor can receive its gift of liquor. This is also the appropriate day to visit the caves to ask for crops and cattle, or to make payment with candles. Friday has a sacred quality because of the crucifixion, but except during Holy Week and Lent the townspeople ignore any proscription on eating meat.

The Annual Cycle

The annual ceremonial cycle of religious rituals and life crisis events establish the pattern by which the people schedule their economic activities. Since the township gained dependence in 1931, there is no forced labor on

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175 632 466 communal projects for the neighboring town as there had been formerly. The peasant is master of his own time.

125 221 512 Tables 33 and 34 summarize the number of days and percentage of time accorded to various activities for men of two households. The first family consists of a man forty-three years of age and his wife. All of their own children died in infancy, and an adopted daughter recently left home to live with her husband and child in a new ejido plot. The second family consists of a man, his wife, two adult sons, and an unmarried daughter. In this family, the father of sixty-five is retired and his two sons perform all of the agricultural work. Table 34 includes only the activities of the sons. 125 221 The two schedules provide some contrasts:

461 462 561 1. The forty-three-year-old man has many more ceremonial obligations than the youths. This is a factor related to the life cycle in which men over thirty-five years of age are involved in more familial and community celebrations. During the year this schedule was taken, the man was serving as a mayordomo.

2. The older man has fewer productively employed days than the youths (only 54 percent of his time is spent in productive activities) in contrast to 76 percent and 79 percent for the youths). The difference is accounted for by wage employment the youths have undertaken. In order to pay for the cost of betrothal, the elder son worked 56 days (37 percent of the time accounted for) in a neighboring sawmill.

3. The youths were not involved in any exchange labor arrangements; until they become independent heads of households working their own fields, the men do not contract reciprocal exchanges.

221 461 462 796 The fact that men spend only 54 to 79 percent of their time (using these tables to provide minimal and maximal limits) on productive activities means that there is a great deal of flexibility in the use of time for ceremonial responsibilities. Everyone takes an average of twenty days off for celebrating fiestas in addition to fifty-two Sundays.

24 46 [796] The high proportion of time spent in family or communal ceremonials suggests the high value placed on them. The preference for leisure to pursue these activities is proved in cases such as that in which the additional profit in cultivating cabbages was not sufficient to motivate one agricultur-

[TEXT CONTINUED ON PAGE 316]

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TABLE 33. Activity Schedule for September 1 to June 29 of Man Owning 1 Hectare of Land and 2 Ejido Plots of ½ Hectare Each

Activity	*Days spent*	*Percent of total time*
Agriculture		46
Preparing land		
Clearing irrigation ditches	12	
Repairing and mending fences	11½	
Clearing land by cutting and burning brush	11	
Irrigating land	8	
Plowing	11	
Planting	6	
Cultivating crops	21	
Guarding crops against animals and birds	3	
Harvesting	34	
Milling sugarcane	8	
Exchange labor	13	
Walking to hot country	4	
Hunting for and tending animals	25½	9
Collecting firewood	13	5
Religious activities		23
Performing duties as mayordomo	26	
Attending Sunday mass and cleaning church	24	
Fiestas, attending mass, participating in playing drum, flute, etc.	21	
Kinship and social obligations		6
Attending funerals	7	
Attending curing ceremonials	3	
Attending betrothal ceremonials	5	
Helping in house-building	1	
Marketing		3
Buying	9	
Selling	1	
Communal labor		2
Cleaning irrigation ditches	1	
Repairing threshing shelter	4	
Business affairs of cooperative	4	1
Assisting town officials	4	1
Outside work	12	4
TOTAL	303	100

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241 461 ist to continue growing this labor-intensive crop (Chapter 2). The low propensity to consume, maintained by community-shared standards which inhibit the display of wealth, further reduces the incentives to expand production (Schultz 1964:27). The major reward for hard work is land which, in his middle years, the agriculturalist can turn over to be worked by his sons, thus relieving him of daily toil.

221 461 462 512 TABLE 34. Activity Schedule for September 1 to February 28 for Two Unmarried Youths

Activity	Younger brother Days spent	Younger brother Percent of total time	Elder brother Days spent	Elder brother Percent of total time
Agriculture		41		25
Preparing land				
Clearing land by cutting and burning brush	26		6	
Irrigating land	3		3	
Plowing land	1		1	
Planting	1		1	
Harvesting crop	11		7	
Doubling over stalks	4		4	
Working in hot country	16		16	
Collecting firewood	6	4	2	1
House maintenance		12		6
Plastering house walls	13		6	
Bringing lumber	2		2	
Making pigpen	3		2	
Pottery		1		1
Bringing clay	2		2	
Agricultural work for others		8		8
Harvesting and carrying corn	3		3	
Plowing	2		2	
Planting	6		7	
Nonagricultural work in sawmill	16	11	56	37
Religious activities		18		21
Attending fiestas	3		3	
Attending mass and relaxing on Sundays	25		28	
Sickness	8	5		
TOTAL	151	100	151	100